

LISTING OF CLAIMS:

The following listing of claims replaces all previous versions and listings of claims in the present application.

1. (Currently amended) A linear electric machine comprising:

a plurality of pairs of teeth circumferentially disposed ~~to~~such that respective surfaces of the plurality of pairs of teeth surround a space;

a yoke disposed around the teeth and magnetically connected to the teeth;

a plurality of coils mounted on the teeth; and

a movable core disposed in the space opposite the teeth to reciprocate transversely to the teeth, said movable core having a plurality of first permanent magnets at axially opposite ends for providing a respective plurality of pairs of magnetic poles on a peripheral surface of each end thereof to face the surfaces of the teeth ~~supplying magnetic flux to the teeth; wherein said movable core comprises means for suppressing generation of a magnetic field disposed~~ and a magnet shielding plate disposed at axially middle portion thereof to magnetically separate the permanent magnets disposed at one end thereof from the permanent magnets disposed at the other end thereof.

2. (Currently amended) A linear electric machine comprising:

a movable core disposed to be able to reciprocate along an axial direction;

a plurality of pairs of magnetic teeth ~~disposed to face~~ the movable core; and

a plurality of coils mounted on the teeth;

wherein said movable core comprises magnetically shielding means for suppressing generation of a magnetic field and a ~~pair~~ plurality of pairs of permanent magnets respectively disposed on the opposite sides of the shielding means in the axial direction to provide a plurality of pairs of magnetic poles on a peripheral surface of each end thereof to face the surfaces of the magnetic teeth.

3. (Original) The linear electric machine as claimed in claim 2,
wherein said magnetic teeth extend perpendicularly to the axial direction of said movable core.

4. (Original) The linear electric machine as claimed in claim 2,
wherein said magnetically shielding means is made of a non-magnetic material.

5. (Currently amended) The linear electric machine as claimed in claim 2,
wherein said magnetically shielding means comprises a ~~second~~ permanent magnet plate that has a plurality of pairs of magnetic poles that are opposite in polarity of the magnetic poles of opposite polarity to the first permanent magnets adjacent thereto.

6. (Original) The linear electric machine as claimed in claim 2,
wherein said movable core further comprises an inductor made of magnetic material disposed in a magnetic path between the first permanent magnets and the teeth.

7. (Currently amended) The linear electric machine as claimed in claim 2 1, further comprising a plurality of magnetic inductors,

wherein said first permanent magnets are ~~disposed around a center of a plane that is perpendicular to the reciprocating direction of said movable core and~~ polarized in directions perpendicular to the reciprocating direction, and said magnetic inductors are disposed between said first permanent magnets in the direction perpendicular to the reciprocating direction to form said magnetic poles, and

wherein a center line (L1) of each said first permanent magnet in a radial direction inclines to a center line (L2) of the teeth.

8. (Original) The linear electric machine as claimed in claim 7,

wherein said first permanent magnets project from said inductors to be located between the adjacent teeth.

9. (Currently amended) The linear electric machine as claimed in claim 7,

wherein said movable core has a magnet shielding ~~member~~hole at the center of the cross-section perpendicular to the reciprocating direction of said movable core.

10. (Original) The linear electric machine as claimed in claim 2,

wherein said coils are connected to an ac power source to reciprocate said movable core.

11. (Original) The linear electric machine as claimed in claim 2,
wherein said movable core is connected to means for reciprocating to generate electric
power at the coils.